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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/964,735	09/28/2001	Shuya Ogi	N36-135856M/TH	2177

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EXAMINER

STULTZ, JESSICA T

ART UNIT	PAPER NUMBER
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2873

DATE MAILED: 04/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/964,735

Applicant(s)

OGI ET AL.

Examiner

Jessica T Stultz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 3/11/03 and 3/25/03.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) 1-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 25-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 November 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6. 6) ☐ Other:

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DETAILED ACTION

Election/Restrictions

Applicant's election with partial traverse of Group III, claims 25-35 in Paper No. 12 is acknowledged. The traversal is on the ground(s) that claims 25, 31-35 should be included in Group III due to amendments made to these claims. The examiner was in agreement and therefore claims 25-35 have been examined herein.

Claims 1-24 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 12.

Drawings

Figures 11 and 17-19 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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Claim 35 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Specifically regarding claim 35, it is unclear as to what the phrase “that are opposite in a thickness direction of the array” refers to as a limitation for the claim. From the specification and the drawings the examiner suggests that the phrase be changed to “that are on opposite surfaces of the array, along the length of the rod lenses” (this being the assumed meaning for purposes of examination).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 26, 29-30, and 34-35 are rejected under 35 U.S.C. 102(b) as being anticipated by Takami et al.

Regarding claim 26, Takami et al discloses a rod lens array in which constituent rod lenses are such that representative values for the center-line-average roughness on their peripheral surfaces are between 0.01 μm and 0.2 μm as averaged for the whole lens array (Column 5, lines 56-62, wherein the center line average roughness of the coating is defined as being 0.2 μm or less, Figures 5 and 9).

Regarding claims 29, it would have been inherent from Takami et al that the rod lens array disclosed above would further include the representative values for the center-line average

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roughness are each a value on a straight line that extends on the peripheral surface of the lens parallel to its axis, this being reasonably based upon the similarity in structure between the drawings of the reference and the claimed invention (Figures 5 and 9).

Regarding claim 30, it would have been inherent from Takami et al that the rod lens array disclosed above would further include the representative values for the center-line average roughness are each the average of values on different straight lines that extend on the peripheral surface of the lens along its axis, this being reasonably based upon the similarity in structure between the drawings of the reference and the claimed invention and since values can be taken along different straight lines across the rod and then averaged to obtain an accurate representation of the entire rod (Figures 5 and 9).

Regarding claim 34, Takami et al further discloses a rod lens array wherein a resin portion that is integral with the constituent rod lenses such that it fills the gap between adjacent rod lenses and surrounds all rod lenses (Column 9, lines 48-53, Figures 5 and 9).

Regarding claim 35, Takami et al further discloses a rod lens array wherein a frame is fixed to at least one of two other surfaces of the resin portion that are on opposite surfaces of the array, along the length of the rod lenses (Column 3, lines 33-40 and Column 5, lines 44-45, wherein it is disclosed that there is some sort of holding plates in the lens array unit which holds the rods in place in the claimed arrangement, as shown in Figures 5 and 9).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 25, 27, and 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takami et al.

Regarding claims 25, 31, and 32, Takami et al discloses a rod lens array including at least one rod lens having a maximum roughness of 0.5 μm to 5.0 μm on the peripheral surface (Column 9, lines 32-37, wherein the maximum roughness of each rod is disclosed as ranging from 0.5 μm to 5.0 μm , Figures 5 and 9), but does not specifically disclose that the center-line average roughness of at least one rod lens, or each rod lens, fall within the claimed range of 0.5 μm to 2.0 μm . However, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the average roughness of the rod lenses of Takami et al fall within the claimed range since Takami discloses a maximum roughness ranging between 0.5 μm to 5.0 μm , which overlaps the applicant's claimed range and goes slightly over this range. However, since these values are for the maximum roughness, it is obvious that the average would be less than the maximum, thereby overlapping or falling within the claimed range.

Regarding claims 27, it would have been obvious from Takami et al that a rod lens array have constituent rod lenses wherein representative values for the center-line-average roughness on the peripheral surfaces of the lenses are between 0.01 μm and 0.2 μm as expressed by standard deviation for the whole lens array since Takami et al discloses the center line average roughness of the coating over the rod lenses be 0.2 μm or less (Column 5, lines 56-62, wherein the center line average roughness of the coating is defined as being 0.2 μm or less, Figures 5 and 9) and since is well known in the art of statistical data collection that the calculation of the value of the standard deviation is an analogous way to determine the average value of a data set.

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Regarding claims 33, it would have been obvious from Takami et al that a rod lens array as disclosed above in claims 26 and 31 further have constituent rod lenses wherein representative values for the center-line-average roughness on the peripheral surfaces of the lenses are between $0.01\text{ }\mu\text{m}$ and $0.2\text{ }\mu\text{m}$ as expressed by standard deviation for the whole lens array (Column 5, lines 56-62, wherein the center line average roughness of the coating is defined as being $0.2\text{ }\mu\text{m}$ or less, Figures 5 and 9) since it is well known in the art of statistical data collection that the calculation of the value of the standard deviation is an analogous way to determine the average value of a data set.

Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takami et al in view of Mc Daniel et al.

Regarding claim 28, Takami et al discloses a rod lens array as disclosed above, but does not specifically disclose that the values of the diameter of the representative rod lenses fall between $0.01\text{ }\mu\text{m}$ to $2.5\text{ }\mu\text{m}$ as expressed by standard deviation for the whole lens array. McDaniel et al teaches of a rod lens wherein the diameter is approximately $0.250\text{ }\mu\text{m}$ (Column 10, line 63-Column 11, line 21, Figure 6), which falls within the range specified above, in order to produce a low mass, low size rod lens (Column 10, lines 63-67, Figure 6) and it would have been obvious from that the diameter values be determined by the standard deviation since it is well known in the art of statistical data collection that the calculation of the value of the standard deviation is an analogous way to determine the average value of a data set. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made for the values of the diameters of the rod lenses used in the rod lens array of Takami et al to range between $0.01\text{ }\mu\text{m}$ to $2.5\text{ }\mu\text{m}$ wherein the diameter values are determined by the standard

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deviation for the whole lens array since McDaniel et al teaches of a rod lens wherein the diameter is approximately 0.250 μm , which falls within the range specified above, in order to produce a low mass, low size lens and since it is well known in the art of statistical calculations to determine the average value of a data set by using the measure of standard deviation.

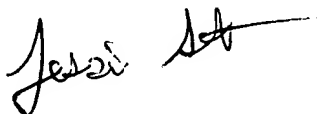
Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Inoue reads on with the structure of the current invention, however was not used in the above rejections.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jessica T Stultz whose telephone number is (703) 305-6106. The examiner can normally be reached on M-Th 7:30-5, and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps can be reached on 703-308-4883. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.



Jessica Stultz
April 3, 2003



JORDAN SCHWARTZ
PRIMARY EXAMINER